COUGAR 5

Multi-fuel stove

Ref. No. T1202 v 1 (22.4.14)

Installation and Operating Instructions

The Cougar 5 stove must be installed by a suitably qualified engineer.
Instructions must be given to the stove user when installation is complete
The installer must instruct user the correct use of the appliance and control operation

The Cougar 5 is manufactured to EN13240:2004 for Arbeia Trading Limited,
a Division of: Cast Tec Ltd., East Side, Tyne Dock, South Shields NE33 5SP
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The Clean Air Act 1993 and Smoke Control Areas

The Cast Tec Cougar 4.7kW multi-fuel stove has been recommended for exemption from UK smoke control areas when burning wood and when fitted with a permanent stop to prevent closure of the secondary airwash control beyond the 25% open position. Also, the tertiary air inlet below the stove must be in a permanently fixed open position.

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from a fixed boiler if located in a designated smoke control area. It is also an offence to acquire an “unauthorised fuel” for use within a smoke control area unless it is used in an “exempt appliance (“exempted” from the controls which generally apply in the smoke control area)

The Secretary of State for Environment, Food and Rural Affairs has powers under the Act to authorise smokeless fuels or exempt appliances for use in smoke control areas in England. In Scotland and Wales this power rests with Ministers in the devolved administrations for those countries. Separate legislation, the Clean Air (Northern Ireland) Order 1981, applies in Northern Ireland. Therefore it is a requirement that fuels burnt or obtained for use in smoke control areas have been "authorised" in Regulations and that appliances used to burn solid fuel in those areas (other than "authorised" fuels) have been exempted by an Order made and signed by the Secretary of State or Minister in the devolved administrations.

Further information on the requirements of the Clean Air Act can be found here: http://smokecontrol.defra.gov.uk/

Your local authority is responsible for implementing the Clean Air Act 1993 including designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements.

Installation Essentials

The installation of a fireplace or stove **must be** in accordance with local codes and regulations, whilst also observing national rules and regulations in each country and other national and European standards that apply.

Your Cougar stove **must be** installed by a **Competent Person** registered with a Government Approved Competent Persons Scheme.

In the UK, **HETAS** is a qualified body that can assist with general advice, regulation, installation, type of fuel usage and can provide a list of registered Competent Persons: website is www.hetas.co.uk

Pre-installation Checks & General Safety

- If you are opening up an old or boarded up chimney or flue please be wary that asbestos (a light grey coloured fire proof board) was often used to seal up or provide a vent into the flue. This material can be dangerous and needs to be handled with care so seek professional advice. Your local council should be consulted about means of disposal.
- Ensure that any **damper flaps** or flue restrictors are fully removed from the flue.
- Ensure that the flue in which the stove is fitted is not being shared by any other appliance.
- Ensure that extractor fans are not fitted in the room in which the stove is to be installed.
- The installer must ensure that the chimney flue is examined and tested for sturdiness and suitability prior to installation. Any remedial work that is necessary should be carried out by a competent person before the stove is fitted.
- Your Cougar stove weighs 99kgs so please ensure that adequate precautions are taken to receive delivery, move and position the stove prior to installation.
- Ensure that an approved **Carbon Monoxide Alarm** is fitted into the room in which the stove is installed.
- Although **additional ventilation** is not normally required in the room in which the stove is fitted, the installer must ensure that there is an adequate air supply and that if the room is particularly or unusually airtight should refer to Document J of the Building Regulations for clarification.
- Ensure that your chimney is swept at least twice a year by a qualified or competent chimney sweep if your stove is being used on a regular basis.
- Ensure that your stove is well maintained **by a competent engineer** throughout its life so that it runs safely and efficiently.
- Ensure that you do not use aerosol sprays or any other combustible materials near to the stove when it is in operation or for some hours afterwards.
- Ensure that you read the instructions of stove care products such as rope seals and glue, fire cement and paint finishes so that they are applied correctly and safely.
- Your stove will become extremely hot during and after use so precautions should be taken to ensure the safety of yourself and others (an approved fireguard for example) and in particular for children, the elderly and the infirm who should be supervised at all times.

1. Technical Data

Material: Cast-iron
Finish: High temperature resistant paint
Fuel: Multi-fuel (approved wood & smokeless fuels)
Log length: 34cm Maximum
Stove Outlets: Top and Rear
Flue Collar Size: 125mm (113cm ^{2} cross section)
Approx. Weight: 99kgs
Distance Specifications: See Figure 2

Technical data according to EN 13240:2001

	Wood	Smokeless Fuels
Nominal heat output	4.7kW	4.3kW
Flue gas mass flow	5.3 g/sec	4.1 g/sec
Recommended chimney draught	12Pa	
Efficiency	74.7%	77.4%
CO emission (13% O_2)	0.19%	0.24%
Flue gas temperature	271.3ºC	267ºC
Operational mode	Intermittent*	

* Intermittent combustion in this context means normal use of the fireplace, i.e. fuel is added as soon as the fuel has burnt down to embers.

2. Installation

2.1 Installation responsibility

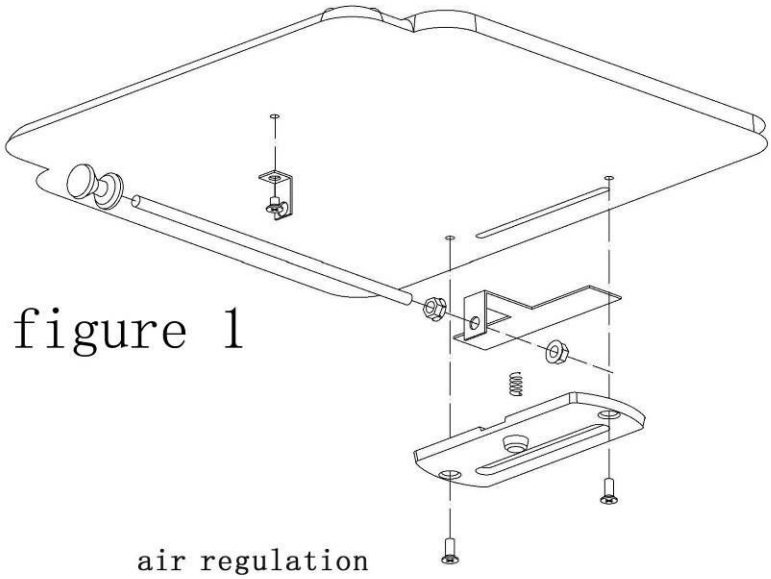
Stove, fireplace and chimney installations **MUST** comply with all current National and Local Building Regulations; your approved dealer or your local building control officer can advise you regarding this. Ultimately, it is you and your installer who is responsible that the installation complies with all the relevant rules, regulations and safety requirements for your area at the time of installation.

2.2 Unpacking the stove

After removing the outer packaging, unbolt the combustion chamber from the wooden pallet and place it gently on its back. The cardboard packaging can be placed underneath to prevent marring. Remove the leg pack from the stove and bolt each leg securely to the underside of the base on the combustion chamber, using the bolts provided (found inside the stove). We recommend that two people perform the assembly and installation procedure.

2.3 Tertiary Air Assembly

The assembly of the tertiary air control is shown in figure 1. This will be fixed in a permanent open position as it allows airflow to be pre-heated to mix with exhaust gases allowing the exhaust gas to re-ignite producing a cleaner and more efficient stove.



2.4 Stove positioning & clearances

The stove must be installed on a level surface with adequate load-bearing capacity. If an existing construction does not meet this requirement then suitable measures such as a load distribution plate must to be taken to achieve it.

Wooden floor protection

The stove can be placed directly on to a wooden floor that is covered by a metal plate or other suitable, non-inflammable material. The recommended minimum thickness is 12 mm.

Any flooring made of combustible materials such as linoleum; carpets, etc. must be removed from under the floor plate. Requirement for protecting combustible flooring in front of, to the sides and rear of the stove must be in accordance with national laws and regulations including BS 8303 and BS EN 15287-1-2007. See **figure 2**

Contact your local building authority regarding restrictions and installation requirements.

Walls protection - Distance to wall made of combustible material

The stove can be situated next to a flammable wall using the minimum distance clearances shown in figure 2 but also refer to Building Regulations BS 8303 and BS EN 15287-1 and any other rules and codes that may be applicable.

Walls protection - Distance to wall covered by a firewall

The stove can be situated next to a firewall* wall using the minimum distance clearances shown in figure 2 but also refer to Building Regulations BS 8303 and BS EN 15287-1 and any other rules and codes that may be applicable.

*The firewall itself must be at least **100mm thick** and be made of brick, concrete or stone. Other materials and structures with satisfactory documentation may be used.

In exceptionable circumstances where **only non-combustible walls** surround the stove **with a minimum thickness of 200mm** the clearance between the rear and sides of the stove may be reduced to 50mm but this may effect efficiency levels which are based on the clearance figures shown in figure 2 and reference should be made to building regulations and any rules in force at the time of installation.

Ceiling protection

There must be a minimum distance of **1200 mm** to a combustible ceiling above the fireplace.

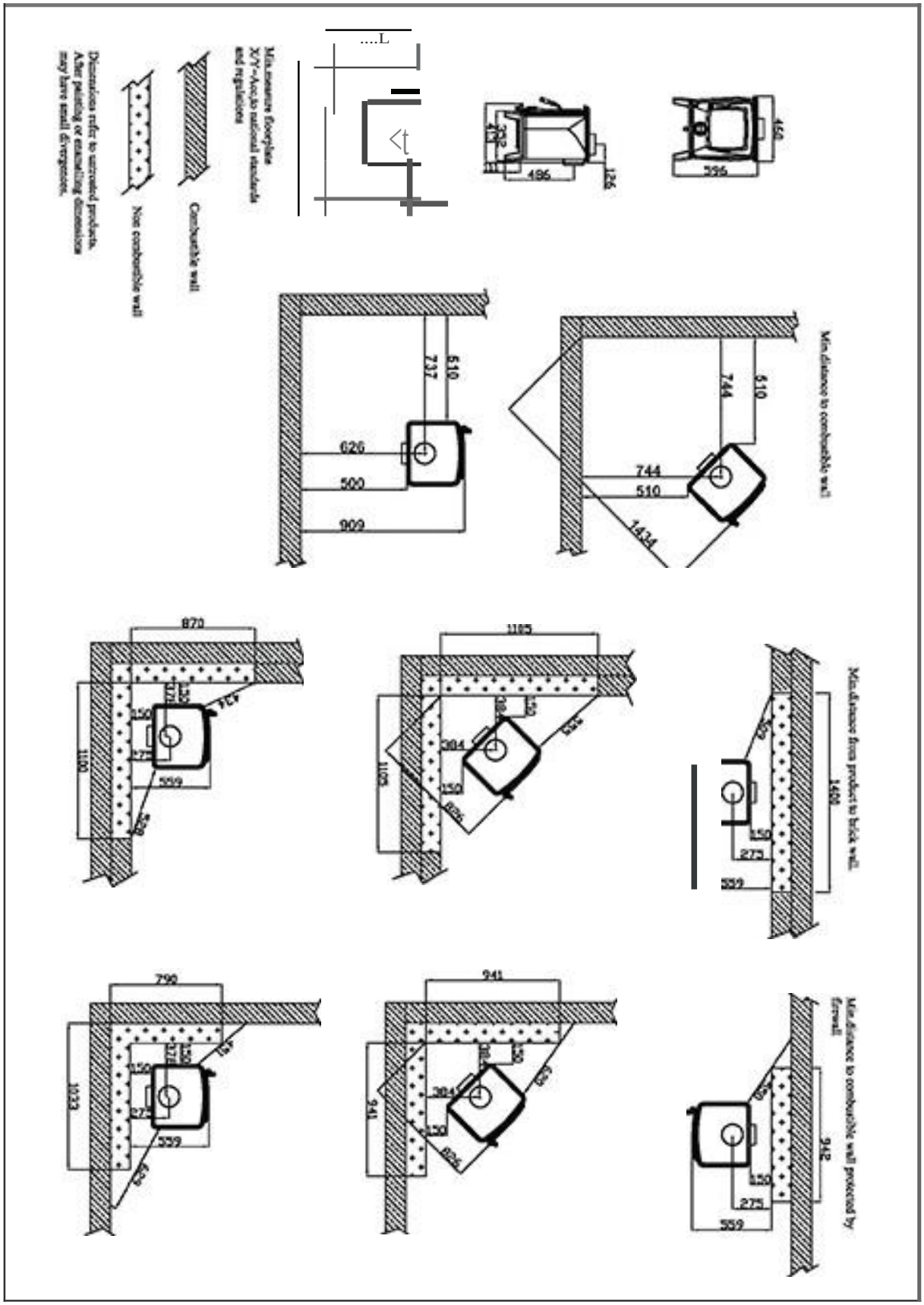
Clearances to furniture and soft furnishings

We recommend that the stove be installed a minimum of 1000mm from furniture and other combustible materials to the front of the stove. Serious consideration should also be given to positioning of any furniture that could be adversely affected by heat. The clearances to combustible materials in front of the stove should therefore be a minimum of 1000mm but the further away the better.

Protecting Children and the Infirm

When lit, a wood-burning stove becomes extremely hot and therefore adequate protection must be provided, particularly in situations where there is a safety risk to children or the infirm. Vulnerable persons should be supervised at all times and a suitable safety guard or fireguard manufactured in accordance with BS 8423-2002 should be considered. Remember, a stove can also remain hot for some hours after the fire has ceased burning.

Figure 2


....L
Combustible wall
Non combustible wall
Min.distance to combustible wall
Min.distance from product to brick wall
Min.distance to combustible wall protected by firewall
610
737
620
500
909
744
510
1434
870
1100
1185
1105
799
1033
941
942
275
329

2.5 The Chimney

This Stove must **never** be connected to any shared chimney.

An efficient modern stove places heavy demands upon a chimney. You should have your chimney regularly swept and inspected by an approved chimney sweep.

The cross-sectional area of the chimney (at its narrowest point) must comply with National and Local Building Regulations. Generally, the area needed for a wood-burning stove installation should measure at least 113cm^2 (125mm diameter).

An over-sized chimney is generally hard to keep warm and results in poor draft. In cases here there is an oversized masonry chimney, it is recommended that the chimney be lined using an appropriate chimney lining system with the correct internal diameter.

With respect to the chimney termination, all chimneys should terminate in accordance with National and Local Building Regulations.

Note that National and Local Regulations also apply with regard to the placement of chimneys and flues in connection with thatched roofs.

The chimney or flue system must be equipped with access doors for inspection and cleaning. The size of the cleaning door in the chimney must at least equal to that of the cross-sectional area of the chimney. In the event that a chimney fire occurs resulting from faulty operation or prolonged use of damp wood fuel, close the air vents completely and contact your local fire department immediately.

2.6 Pipe connections

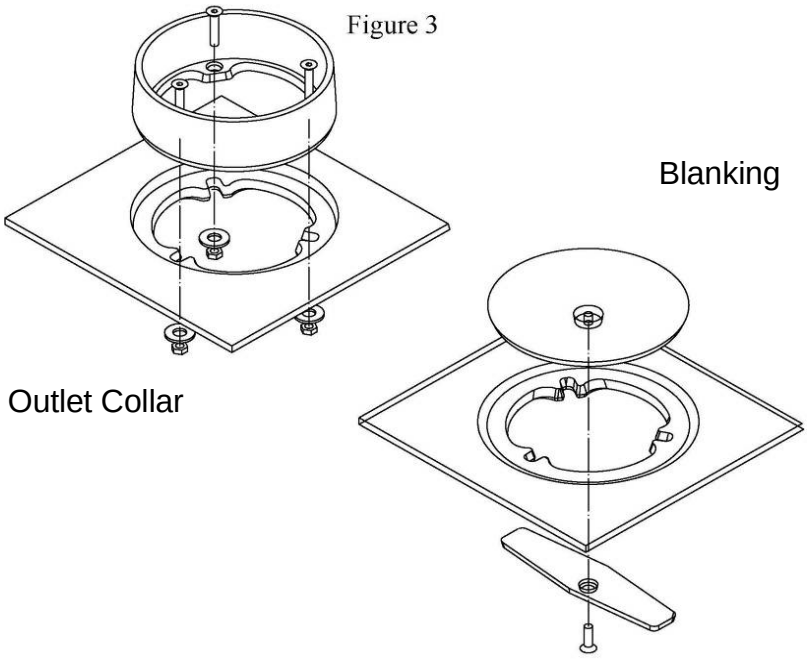
The stove is supplied with a 125mm diameter flue outlet collar to which a suitable rigid metal flue pipe can be attached (not supplied). This must be of an approved thickness.

The flue outlet collar for this product is inside the burn chamber during transportation.

You can choose between a **top** or **rear** position for the flue outlet collar. There are three screws provided for fastening the flue collar to the desired outlet. The outlet not being used is closed off with a blanking plate with fixings that are provided. See figure 3.

Note! It is important that the joints are completely sealed. Air leakage etc. may lead to malfunction.

Figure 3



2.7 Connecting to a masonry chimney

A wall sleeve should be bricked securely into the wall of the chimney at the appropriate height and the stovepipe inserted centrally. The pipe must not extend into the actual chimney opening, but rather must reach only to the inside of the chimney aperture. The gap between the stove pipe and sleeve must be sealed using glass fibre packing rope.

2.8 Connecting to a steel chimney

If your installation involves taking the chimney straight up and through the ceiling, you **must** comply with National, Local Building Regulations or flue manufacturers instructions concerning clearances to combustible materials such as walls, floor joists and ceilings. The joint between the stove flue collar and the stove pipe must also be sealed using the glass fibre rope provided. It is important that the insulated flue system is properly supported both at ceiling level and at roof level.

THE STOVE MUST NOT BEAR THE WEIGHT OF THE CHIMNEY SYSTEM.

(See chimney manufacturer’s instructions). Excessive weight on the stove will inhibit expansion and could lead to damage of the stove top. Damage caused to the stove in this way would not be covered by the manufacturers guarantee.

CAUTION:

In the event that a chimney fire occurring resulting from faulty operation or prolonged use of damp wood fuel, close the air vents completely and contact your local fire department immediately.

Cleaning procedure: Discuss this with chimney sweep or qualified installer prior to or during the stove installation

Chimney draft: If the chimney draft is naturally poor it is better to install the flue from the top of the stove so as to minimise any internal resistance of the flue gases. Avoid having any more than 2 bends in the flue system and limit the length of the offset between bends. Refer to chimney manufacturers' instructions.

Fresh air supply:
A wood-burning stove requires air for combustion and therefore you may need to install additional ventilation to the room, especially in well-insulated houses. If the air supply is inadequate the chimney draft may be too weak, with the possible result that the stove will not burn properly; smoke spillage may also occur during the refueling process.

Your Cougar Stove is CE tested to 4.9kW nominal heat output, therefore a purpose provided air vent is **not normally** required (refer to Building Regulations Document J) in the same room as the stove, however, in certain circumstances an air vent may be required such as in a case of insufficient natural ventilation.

If it is decided that an air vent is to be fitted due to insufficient natural ventilation or any other reason it is important to ensure that the vent is the correct size and is non-closable in design. National and local laws and building regulations must be followed for the installation of any air vents deemed to be necessary. These vents should be installed in such a way that they are not liable to become blocked or restricted.

Do not use any extractor fans or similar devices in the room in which the stove is fitted as this can affect the airflow to your stove.

2.9 Draft conditions

If smoke spillage occurs when the fire door is opened, it is probably due to poor chimney draft. This type of stove requires at least **12 pa** of chimney draft to achieve satisfactory combustion and smoke spillage prevention. However, in cases where the stove door is opened too vigorously you could expect that slight smoke spillage may occur.

If you have any doubts, you may want to have your installer measure the draft in the chimney. The chimney's draft is the resulting effect within the flue caused by the difference in temperature within the flue and the cooler temperature outside.
Other factors that can influence the level of draft include the length of the flue, insulation of the chimney, adverse weather conditions or tall buildings or trees nearby the flue terminal.

Poor draft occurs when:

- The atmospheric temperature difference is too low, e.g. a poorly insulated chimney. If the chimney is excessively cool, it may help to 'prime' the flue before the fire is lit. Just place a screwed-up sheet of newspaper in the flue way of the stove and ignite.
- The outside temperature is too high, e.g. during the summer months.
- There is no air movement (wind) outside.
- The chimney is not tall enough, with the result that the terminal sits in the lee of the roof surface or in the vicinity of tall trees or neighbouring buildings. These conditions are also associated with downdraft where the flue gases are pushed back down the chimney.
- The flue draft is diluted by residual air entering the chimney, e.g. due to inadequate fluepipe joints or leaks at the cleaning door or flue collar.
- Unsealed, unused fireplaces are connected to the chimney.
- The flue is blocked, e.g. by soot, due to inadequate cleaning, loose debris or even a birds nest.
- The room in which the stove is fitted is too tightly sealed (see section on fresh air supply).

A good draft is achieved when:

- The temperature difference between the internal chimney flue (inside of the property) and the outside of the property (external atmosphere) is high. (This particularly applies during firing, when the need is greatest.
- The weather is clear and there is a good wind.
- The chimney is of the proper height, i.e. minimum 4 metres over the stove and the termination adequately clear of the roof line.
- There is adequate ventilation in the room in which the stove is fitted.

2.9.1 Commissioning & Handing Over

- Make sure that all parts are fitted to the stove according to these instructions before handing over to user.
- Allow a reasonable time for fire cement and mortar to dry out before lighting the stove.
- After lighting the stove for the first time check that all seals and joints are sound and secure and that the flue is functioning correctly and emitting combustion waste safely into the atmosphere.
- After installation and commissioning hand over the operating instructions to the user and demonstrate how to operate the stove.
- Ensure that the user is aware of the correct fuels to use in the appliance.
- Give the user suitable advice as to what to do in the case of smoke or fumes being emitted from the stove or flue connections.
- Warn the user of the dangers of touching the surface of the stove whilst still hot and give general safety advice to protect others, especially children, the elderly and infirm. Hand over the pair of approved heat resistant gloves provided.

3. User Manual

3.1 Choice of fuel

Recommended Wood

Although you can fire your stove with almost any kind of wood we recommend the use hardwood logs. Whatever type of wood you use you must ensure that the wood is correctly seasoned and in no way damp or wet. Wood ought to be stored under a roof for at least 1 year, and preferably 2 years, with free access to wind ventilation. Wood should be chopped as soon as possible after felling if it is to dry quickly and can be used once the moisture content is less than 20%

During the EN test, all stoves are tested with wood with a moisture content of (16 ± 4)%. Hardwood has a higher calorific value (oak, ash, maple, birch, elm, beech, etc.).

Pieces of wood with a diameter greater than 10cm should always be chopped. The pieces of wood should be short enough to be able to lie flat over the layer of embers, with air at both ends. The maximum length of fuel in the stove should be no more than 34cm.

Recommended Smokeless Fuels

Coalite Nuts, Phurnacite, Ancit and Extracite.

Fuels we do NOT recommend:

“Green wood”. Green or damp wood reduces stove efficiency and soils the glass, the internal walls and the flue (soot, tar, etc.).

“Used timbers”. Burning treated wood (railway sleepers, telegraph poles, offcuts of plywood or chip board, pallets, etc.) quickly clogs the flue ways and glass with soot and tar etc. and also pollutes the environment and causes the fire to burn too quickly and overheat. “Green wood” and “recovered wood” can eventually cause a chimney fire with their deposits.

Prohibited fuels:

Plastic bags, liquid fuels, waste materials and any form of bituminous coal or petroleum based coke. Your stove should never be used as an incinerator. **This is dangerous and will damage your appliance and pollute the atmosphere**.

3.2 Use

Using the stove for the first time

We recommend that you make two or three small fires at first lasting for about an hour each before you operate the stove at maximum heat output. This is to allow the paint to cure steadily and to give a long life to the paint finish.

During the curing process you may notice that the paint on the stove softens or appears wet. Under no circumstances touch the stove at this stage. As the stove heats up further the paint may appear patchy with soft and dry patches but will then appear totally dry again.

In the later stages of the cycle when the silicon resin cures (this gives the paint its high temperature properties) you may notice a non-toxic smoke or gas and an unpleasant smell, which is primarily carbon dioxide with other residual components. This smell may cause some distress to individuals or animals so for comfort during this period it is recommended that you open windows and doors in the room until the smell subsides and all traces of the gas or smoke have disappeared.

Once this stage has been achieved the curing process should be complete and your stove will be ready to be used to maximum capacity.

Air Controls: (see Figure 4)

The amount of heat emitted by the stove is regulated using three air controls.

The **Primary** air supply, where air passes up through the riddling grate, is controlled using the larger rotating knob in the centre of the stove just below the window (clockwise to close, anti-clockwise to open).

The **Secondary** air supply (often called the airwash system), which is supplied to the combustion over the glass, is controlled using the upper air control lever above the stove window (move left to close, right to open).

A third air inlet (called the **Tertiary** air) provides a constant, pre-heated air supply to the combustion just above the fire. This is controlled using the push and pull lever control below the ash lip between the legs of the stove. This air supply normally does not need to be regulated and therefore is usually left open.

3.2.1 Use with wood

Lighting (see Figure 4)

• Slide the top Secondary Airwash Control to the right to open.
• Open the Primary Air Control anti-clockwise to open.
• Open the door and lay firelighters or rolled up newspapers onto the grate. Add a small quantity of dry kindling wood if necessary. Now place 2 or 3 small logs on top.
• Light the newspaper or firelighters using a long taper and close the door.
• When the fire is burning fiercely, add further logs of a diameter up to 10 cms.
• When the stove body is very hot, close the lower Primary Air Control.
• The burning rate can now be lowered by moving the top Secondary Airwash Control to a smaller air inlet.

Re-fuelling: (see Figure 4)

• Slide the top Secondary Airwash Control to the right to open.
• Open the Primary Air Control anti-clockwise to open.
• Open the stove door and add some logs. (When loading fuel, the door should be opened slowly, avoiding a sudden rush of intake air, so that smoke does not escape into the room.)
• Leave the Primary Air Control open for a few minutes to allow the initial volatiles in the wood to burn.
• Close the Primary Air control.

Very Important:

Wood is a material that contains a great deal of gas (approximately 75%). The gases are released when the wood is lit and heated up. For this reason, it is important that the gases are ignited quickly after stoking. If the wood just lies smoldering, especially after re-stoking, a lot of smoke is created, which, in the worst case scenario, may cause an explosive ignition of the gasses, resulting in damage to the stove.

In order to ignite the gases that are released from the wood, and to keep clear, lasting flames during the combustion process, it is important to let in the required quantity of oxygen (air supply) at all times. The setting of the air supply, the method of ignition and the lighting intervals depend on the draught in the chimney, the wind and weather, the amount of heat required, the fuel, etc. This means that it may take some time before you get to know the correct functioning of the stove under any given circumstances.

3.2.2 Use with solid fuel

Lighting (see Figure 4)

• Slide the top Secondary Airwash Control to the right to open.
• Open the Primary Air Control anti-clockwise to open.
• Open the door and lay firelighters or rolled up newspapers onto the grate. Add a small quantity of dry kindling wood if necessary. Now place a small quantity of solid fuel on top.
• Light the newspaper or firelighters using a long taper and close the door.
• When the fire is burning fiercely, add further fuel.
• When the stove body is hot, close the Secondary Airwash Control.
• The burning rate can now be adjusted by the Primary Air Control.

Re-fuelling: (see Figure 4)

• Open the Primary Air Control.
• Open the stove door and add some fuel. (When loading fuel, the door should be opened slowly, avoiding a sudden rush of intake air, so that smoke does not escape into the room.)
• Leave the Primary Air Control open for a few minutes to allow the initial volatiles in the fuel to burn.
• Adjust the Primary Air Control to the desired position.

Re-fuelling when fire bed is low:

If there is insufficient burning material in the fire bed to light a new fuel charge, excessive smoke emission can occur. Refueling must be carried out onto a sufficient quantity of glowing embers and ash so that the new fuel charge will ignite fairly quickly. If there are too few embers in the fire bed try adding some suitable wood kindling so as to prevent excessive smoke.

Fuel overloading:

Do not overload the fuel inside the stove or exceed any guidelines mentioned in these instructions as this can cause excess smoke.

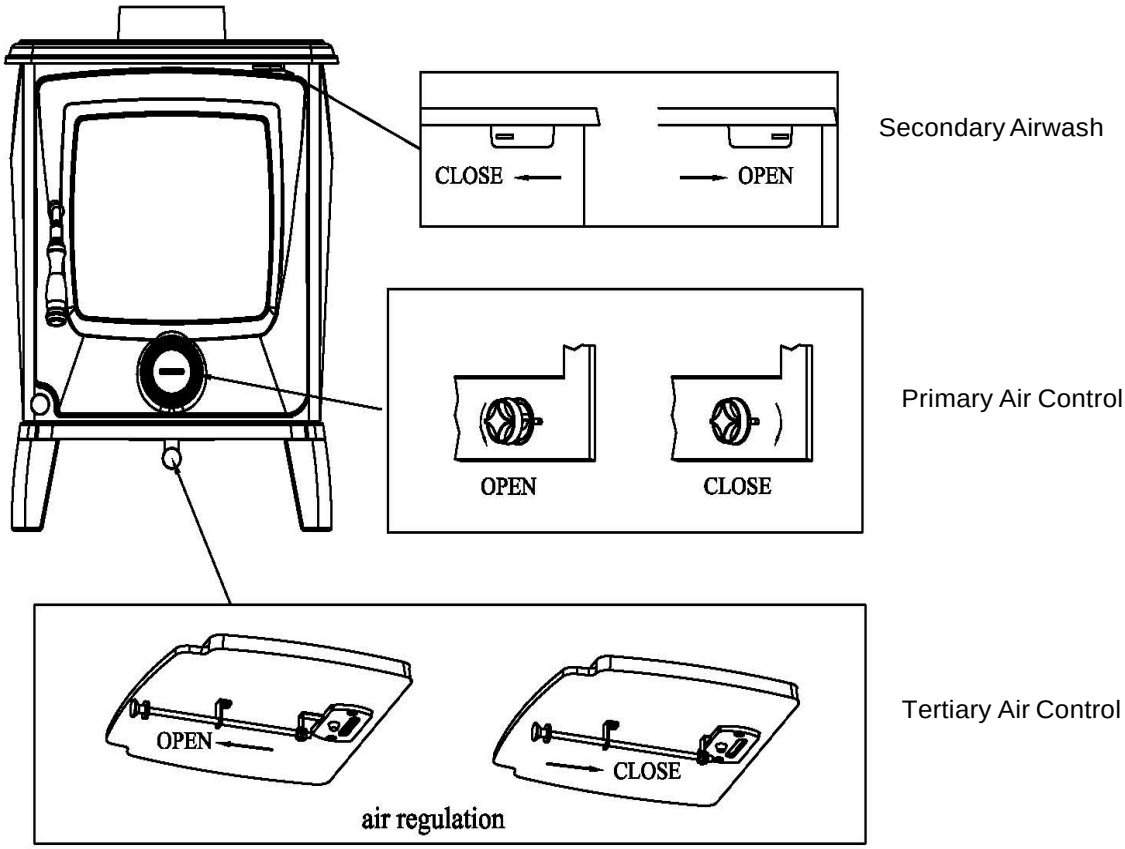
Door left open:

Do not operate the stove with the door left open except for the guidelines mentioned in these instructions as this can cause excess smoke.

Air Controls left fully open

Do not operate the stove with the continually with the controls fully open except for the guidelines mentioned in these instructions as this can cause excess smoke and result in inefficient combustion.

Figure 4



Very Important:

The stove door should never be opened when the stove is being fired vigorously.

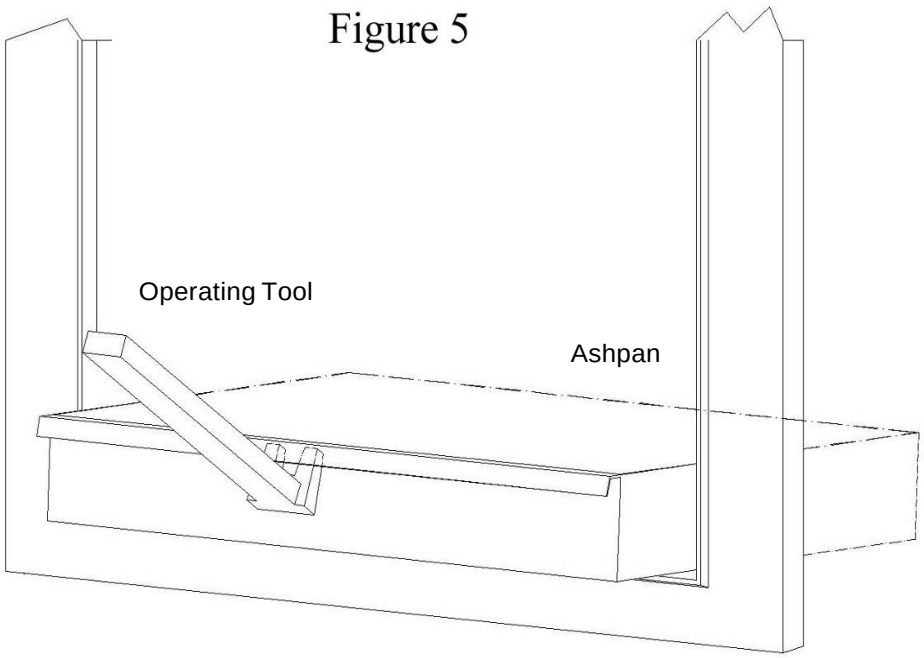
- We would strongly recommend that you do not leave your stove alight at night when burning wood. It harms the environment, and constitutes very poor use of the wood, as the gases in the wood do not ignite at the low temperature, but settle as soot (unburned gases) in the chimney and stove. Extreme conditions, such as poor draught in the chimney, large quantities of wood or wet wood, may, in the worst-case scenario, cause an explosive ignition.
- When firing in the summer period, when there is minimal need for heat, the combustion will be poor. The stove provides too much heat, so the combustion should be reduced. But always remember to make sure that there are lasting flames until the wood becomes charcoal. If you want a weaker fire, stoke up using less wood.
- If you fire the stove using wet wood, a lot of the fuel's thermal energy will be spent forcing the water out of the wood, without releasing any heat to the stove. This incomplete combustion results in a layer of soot being left in the stove, pipe and chimney.

3.2.3 Ash removal: (see Figure 5)

It is essential to keep the bottom grate in the stove free from a heavy build up of ashes. To help prevent this, your stove is equipped with a grate riddling device which is used to “shake” ashes off the grate into the ashpan. Whenever the stove is burning lifelessly and the Primary Air Control is open, use the tool provided to operate the riddling lever to clear the grate of surplus ashes.

If burning solid fuel, always empty the ashpan at least once a day or whenever it is full of ashes. Use the tool provided to remove and replace the ashpan. Never allow the ashpan to overfill allowing ash to be in contact with the underside of the grate. If this condition is allowed, the grate will wear out pre-maturely. Ensure that ashes are disposed of safely and do not come into contact with combustible materials until all the cinders have completely cooled.

Figure 5



Always use the tool provided to operate the riddling control and to lift the ashpan.

3.3 Maintenance

3.3.1 Cleaning glass

This stove is equipped with an air wash system for the glass. Air is sucked in through the air vent above the stove and down along the inside of the glass.
However, some soot will always stick to the glass, but the quantity will depend upon the local draught conditions and adjustment of the air wash vent. Most of the soot layer will normally be burned off when the air wash vent is opened all the way and a fire is burning briskly inside the stove.

Good advice! For normal cleaning, when the stove is extinguished and cold, moisten a paper towel with warm water and add some ash from the burn chamber. Rub it over the glass and then clean the glass with clean water and then dry. If it is necessary to clean the glass more thoroughly we recommend using a glass cleaner (follow manufacturer's instructions on the bottle).

3.3.2 External surface cleaning

The cast surface of the stove is painted with heat-resistant paint. It is best maintained by simply vacuuming it with a soft brush attachment or wiping it down with a dry, dust-free cloth whilst the stove is cold and not in use.

If the stove is used too vigorously, the painted surface may assume a greyish tinge over time, but cast-iron is a robust material and the stove can easily be freshened up with a heat resistant spray paint, which is available from your local retailer (follow the spray paint manufacturer's instructions).

3.3.3 Gaskets

The gaskets in the door will wear out over time, and should be replaced as required in order to prevent runaway combustion. Ensure that your stove is regularly serviced by a qualified engineer.

3.4 Operational problems – troubleshooting

Problem	Probable causes	Action
Fire difficult to start	**Wood damp / poor quality.**	– Use the recommended fuel.
	Logs are too big.	– To light the fire, use small, very dry twigs. To maintain the fire, use split logs.
Fire goes out	**Air starvation.**	– Open Primary and Secondary Air Controls.
	Insufficient draught.	−Check that the flue is not obstructed, sweep it if necessary or contact a chimney engineer.
Fire burns too quickly.	**Too much draught.**	– Ensure that the lower spin wheel is closed Partially close the top air control lever.
	Excessive draw.	– Install a draught stabiliser. Consult your Dealer.
	Poor quality wood.	– Do not continuously burn small wood, sticks, bundles, carpentry offcuts (plywood, pallets), etc.
Smokes when lighting up.	**Flue duct is cold.**	– Burn paper and kindling wood to increase heat.
	Room decompression.	– In houses equipped with mechanical ventilation, open a window until the fire is well
Smokes while burning.	**Ventilation is insufficient**	– Consult a chimney specialist. Check that the flue is not obstructed, sweep if necessary.
	Down draught.	– Install an anti-down draught cowl. Consult your Dealer.
	Room decompression.	– In houses equipped with Mechanical Ventilation, an outside air intake must be
Low heat output.	**Incorrect Fuels**	– Use the recommended fuel.

3.5 Replacement Parts

The Cougar stove is manufactured in cast-iron. Replacement cast-iron parts are listed below. Other Component Parts are listed on page 22 and 23.

Only use replacement parts recommended by the manufacturer. Replacement parts are available from your local retailer or by contacting us directly through our website contact page: www.casttec.co.uk.

Your Cougar stove has a statutory guarantee (remember to keep a copy of your purchase from your retailer), however, some parts of the stove are classed as consumable products such as rope seal, gaskets, glass, grates and ashpans. These parts may need replacing periodically depending upon frequency of use and general stove care.

Modifications to your stove must not be made under any circumstances. Cast-

iron Parts & Replacement Components (see Assembly Details)

No.	Code	Cast-iron Parts	Weight	Quantity
1	501	Base	9.26	1
30	502	Hob	10	1
13	503	Front	4.7	1
8	504	Back	7.45	1
24	511	Back Brick	3.8	1
21	514	Grate	6.5	1
26	516	Middle Baffle	2.98	1
25	517	Lower Baffle	1.9	1
29	518	Top Baffle	2.35	1
20	556	Are Wash Cover	0.5	1
28	51213	Left, Right Brick	2.5	2
84	AF0509	Air wash Base	1.74	1
22	AF0515	Moving Grate	1.56	1
9	C125	Flue Cover Blanking Plate	0.77	1
10	C125Y	Blanking Plate Locking Bar	0.2	1
2	CA0903	Back Air Damper	0.26	1
39	CAF0660	Spin Valve	0.36	1
16	T120105	Left Plate	6	1
18	T120106	Right Plate	6.1	1
42	T120120	Fire Fence	1.8	1
12	T120207	Fire Door	7.5	1
43	125	Spigot	1.1	2
32	523	Leg	0.68	4
63	CA0105	Ashpan Tool	0.36	1

No.	Codes	Component Parts	Description	Quantity
3	CA0702	Spring	Φ8	1
4	CA0901	Back Air Plate	75+75	1
5	CA1103	Damper Rod Bracket	/	1
7	CA130104	Damper Rod	280×8	1
23	CA1401-SM05	Riddling Rod	223×39×64	1
68	CA0409	Kep Nut	M8	2
53	CA0217	Hexagon head bolts	M6×40	2
56	CAL0102-007	Hexagon head bolts	M6×20	2
51	CA0214	Hexagon head bolts	M6×25	15
55	CA0211	Hexagon head bolts	M6×10	1
45	CA0225	Hexagon head bolts	M8×25	4
46	CA0292	Flat counter sunk bolts	M6×10	2
57	BXGCT	Flat counter sunk bolts	M6×30	2
64	CA1113-05	Air Wash Shutter	272×87×4	1
65	CAL0103	Axial Fiber	M5×14	2
66	CAL0101-ZJ	Date Plaque	60×19	1
67	BXGMD-2	Rivet	Φ5×12	2
70	CA0274	Flat counter sunk in-hexagon bolts	M6×20	1
47	CA0293	Flat counter sunk in-hexagon bolts	M6×8	8
62	CA0267-001	Cup head bolts(+)	M8×35	1
52	CA0302	Washer	Φ6×22	14
54	CA0301	Washer	Φ6×18	5
40	CA0403	Nut	M8	1
14	CA1602	Door Hinge	24×50	2
44	CA0801	Fiberglass rope	Φ6	/
17	CA0802	Fiberglass rope	Φ8	/
78	CA0225	Hexagon head bolts	M8×25	4
69	CA0305	Washer	Φ8×30	4
34	CA1503	Door Catch	16×35×3	1
83	CA0502	Spring Washer	Φ10	1
37	CA0412	Nut	M10	1
38	CA010402	Pull Rod Knob	8Φ25×30	2
41	CA1204	Ashpan	290×260×40	1
48	CA1112	Glass Clips	/	4
49	CA10T1201	Door Glass	286×264×4（5）	1
50	CA0293-1	Hexagon head bolts	M6×8	4
61	CA0801	Fiberglass rope	Φ6	/
60	CA0802	Fiberglass rope	Φ6	/
33	CA0101-ZH	Fire Door Handle Axle	60Φ10×35	1
78	CA0225	Hexagon head bolts	M8×25	5
69	CA0305	Washer	Φ8×30	5
35 *	CA0102-ZH	Door Handle Bar	/	1

79 *	CA0266	Cup head bolts(+)	M8×105	1
81 *	CA0501-1	Spring Washer	Φ8	1
59	CA0402	Nut	M6	3
80	CA0276	Flat counter sunk in-hexagon bolts	M6×30	3
58	CA0302	Washer	Φ6×22	3

* Door Handel

3.6 Cougar 5 Assembly